

Amendment under 37 C.F.R. §1.114
Attorney Docket No. 031029
Application No. 10/647,247

REMARKS

Claims 1, 3, 5-11, 14-19 and 21-26 are pending in the present application. Claims 1, 21 and 26 are herein amended. No new matter has been presented.

Claim Rejections - 35 U.S.C. § 103

Claims 1, 3, 5, 6, 8, 10, 11, 14, 15, 18 and 19 were rejected under 35 U.S.C. § 103(a) as being unpatentable over **Kanda** (EP 1152036) in view of **Mouri** (US 2002/0012035); claim 7 was rejected under 35 U.S.C. § 103(a) as being unpatentable over **Kanda** in view of **Mouri**, and further in view of **Suzuki** (US 6,043,145); and claims 16 and 17 were rejected under 35 U.S.C. § 103(a) as being unpatentable over **Kanda** in view of **Mouri**, and further in view of **Takahashi** (US 6,537,719) and **Tanaka** (US 6,555,617).

Favorable reconsideration is requested.

Applicants respectfully submit that Kanda in view of Mouri does not teach or suggest:

wherein the opening dimension D (nm), and an average opening dimension Dav. (nm) of the smoothed resist pattern whose wall surfaces have been smoothed satisfy the relation expressed by:

$$\text{Dav. (nm)} \geq \text{D (nm)} \times (90/100)$$

as recited in amended claim 1, and similarly recited in amended claims 21 and 26.

The Office Action maintains the position that based on the description in Example 2 of Kanda that no unevenness on the coating such as fish eyes and striations was observed in the resist pattern, the average opening dimension is 90% or greater. The Office Action also maintains that based on Table I of Kanda, Kanda discloses that the maximum and minimum values of the opening dimensions are within $\pm 3\%$ of a predetermined opening dimension.

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(Office Action, pages 7-8.)

Applicants previously pointed out that according to the present invention, the resist pattern is smoothed without thickening, and in this regard the present invention is distinguishable from Kanda because Kanda relates to thickening of a resist pattern. (Amendment, July 19, 2010, pages 11-12.)

In the examples of Kanda, a thickening material is applied on a resist pattern without forming unevenness such as fish eyes and striations. The Office Action takes the position that fish eyes and striations disclosed in Kanda correspond to “openings” as recited in the present claims. (Office Action, pages 7-8.)

In response, Applicants have amended the claims to clarify that the term “opening” in the claims denotes holes and lines, and not fish eyes and striations disclosed in Kanda. More specifically, claim 1 has been amended to recite that a specific location of a resist is selectively exposed to form an opening at the exposed specific location. With this amendment, Applicants note that the terms such as D, D_{max}, D_{min} and D_{av} in the claims denote not the dimensions of fish eyes or striations but the dimensions of holes and lines of a resist pattern.

The specification at page 9, lines 7-12 states:

The resist pattern may be a hole pattern, or a line-and-space pattern, and can be appropriately selected in accordance with the object. From the viewpoint of the effect of smoothing the wall surface of the resist pattern, the opening dimension (the diameter or the width) D is preferably about 50 nm to about 150 nm, and more preferably 100 nm to 120 nm.

Thus, the opening dimensions recited in the claims is not the size of the unevenness of a coating

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but the size of holes and lines of a resist pattern.

Double Patenting Rejection

Claims 1, 3, 5-11, 14-19 and 21-26 were rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-18 of US Patent No. 7,416,837.

Applicants have concurrently filed a terminal disclaimer for overcoming the obviousness-type double patenting rejection. Withdrawal of the double patenting rejection is requested.

For at least the foregoing reasons, claims 1, 3, 5-11, 14-19 and 21-26 are patentable over the cited references. Accordingly, withdrawal of the rejection of claims 1, 3, 5-11, 14-19 and 21-26 is hereby solicited.

In view of the aforementioned amendments and accompanying remarks, Applicants submit that the claims, as herein amended, are in condition for allowance. Applicants request such action at an early date.

If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney to arrange for an interview to expedite the disposition of this case.

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If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

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